

Docket No. AUS920000939US1

**CLAIMS:**

What is claimed is:

1. A method of debugging a software program, said  
5 software program executing properly with at least one of  
a first set of options and executing improperly with at  
least one of a second set of options, said method  
comprising the steps of:
- generating a first log file by executing said  
10 program with said at least one of said first set of  
options, said first log file including all functions  
executed by said program during this first execution;
- generating a second log file by executing said  
15 program with said at least one of said second set of  
options, said second log file including all functions  
executed by said program during this second execution;  
and
- comparing said first log file with said second log  
20 file to debug the software program.
2. The method according to claim 1, further comprising  
the steps of:
- generating said first log file including a first set  
of return codes;
- 25 generating said second log file including a second  
set of return codes; and
- comparing said first set of return codes with said  
second set of return codes to debug the software program.
- 30 3. The method according to claim 1, further comprising  
the step of compiling said software program to generate

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compiled code, said compiled code including a listing of said functions.

5. The method according to claim 3, further comprising  
10 the step of generating a file including said listing  
obtained from said compiled code.

6. The method according to claim 5, further comprising the step of utilizing a UNIX dump command to generate said file, said UNIX dump command causing an output of  
15 said listing.

7. The method according to claim 6, further comprising  
the step of generating a debug script utilizing said  
20 file.

8. The method according to claim 1, further comprising the steps of:

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        automatically generating a debug script including
25  the steps of:

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generating script code for each of a plurality of function calls included in said software program, said script code setting a breakpoint at each of said plurality of function calls;

30           generating script code which logs each of  
a plurality of said plurality of functions  
calls executed by said software program when

Table 1	
Summary of the results of the 1990-1991 survey of the health status of the population of the Republic of Serbia	
1. General health status	2. Health status of the population by sex and age
3. Health status of the population by region	4. Health status of the population by education
5. Health status of the population by occupation	6. Health status of the population by income
7. Health status of the population by housing conditions	8. Health status of the population by smoking habits
9. Health status of the population by alcohol consumption	10. Health status of the population by diet
11. Health status of the population by physical activity	12. Health status of the population by mental health
13. Health status of the population by chronic diseases	14. Health status of the population by acute diseases
15. Health status of the population by infectious diseases	16. Health status of the population by non-infectious diseases
17. Health status of the population by congenital diseases	18. Health status of the population by acquired diseases
19. Health status of the population by injuries and poisoning	20. Health status of the population by mental disorders
21. Health status of the population by substance abuse	22. Health status of the population by drug use
23. Health status of the population by mental health services	24. Health status of the population by physical health services
25. Health status of the population by health insurance	26. Health status of the population by health expenditure
27. Health status of the population by health equity	28. Health status of the population by health status indicators
29. Health status of the population by health status indicators	30. Health status of the population by health status indicators

said software program is executed under the control of said debug program; and

generating script code which causes execution of said software program to continue after each of said plurality of said plurality of function calls is logged.

9. A computer program product for debugging a software program, said software program executing properly with at least one of a first set of options and executing improperly with at least one of a second set of options, said computer program product comprising:

instruction means for generating a first log file by executing said program with said at least one of said first set of options, said first log file including all functions executed by said program during this first execution;

instruction means for generating a second log file by executing said program with said at least one of said second set of options, said second log file including all functions executed by said program during this second execution; and

instruction means for comparing said first log file with said second log file to debug the software program.

10. The product according to claim 9, further comprising:

instruction means for generating said first log file including a first set of return codes;

instruction means for generating said second log file including a second set of return codes; and

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instruction means for comparing said first set of return codes with said second set of return codes to debug the software program.

5 11. The product according to claim 9, further comprising instruction means for compiling said software program to generate compiled code, said compiled code including a listing of said functions.

10 12. The product according to claim 11, further comprising instruction means for compiling said software program utilizing a C compiler and utilizing a "-g" option, said "-g" option generating said listing of said function.

15 13. The product according to claim 11, further comprising instruction means for generating a file including said listing obtained from said compiled code.

20 14. The product according to claim 13, further comprising instruction means for utilizing a UNIX dump command to generate said file, said UNIX dump command causing an output of said listing.

25 15. The product according to claim 14, further comprising instruction means for generating a debug script utilizing said file.

30 16. The product according to claim 9, further comprising:

instruction means for automatically generating a debug script including:

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instruction means for generating script code for each of a plurality of function calls included in said software program, said script code setting a breakpoint at each of said plurality of function calls;

instruction means for generating script code which logs each of a plurality of said plurality of functions calls executed by said software program when said software program is executed under the control of said debug program; and

instruction means for generating script code which causes execution of said software program to continue after each of said plurality of said plurality of function calls is logged.

17. A system for debugging a software program, said software program executing properly with at least one of a first set of options and executing improperly with at least one of a second set of options, comprising:

a first log file being generated by executing said program with said at least one of said first set of options, said first log file including all functions executed by said program during this first execution;

a second log file being generated by executing said program with said at least one of said second set of options, said second log file including all functions executed by said program during this second execution; and

means for comparing said first log file with said second log file to debug the software program.

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18. The system according to claim 17, further comprising:

said first log file being generated including a first set of return codes;

5       said second log file being generated including a second set of return codes; and

means for comparing said first set of return codes with said second set of return codes to debug the software program.

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19. The system according to claim 17, further comprising said software program being compiled to generate compiled code, said compiled code including a listing of said functions.

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20. The system according to claim 19, further comprising said software program being compiled utilizing a C compiler and utilizing a "-g" option, said "-g" option generating said listing of said function.

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21. The system according to claim 19, further comprising a file being generated including said listing obtained from said compiled code.

25   22. The system according to claim 21, further comprising a UNIX dump command being utilized to generate said file, said UNIX dump command causing an output of said listing.

23. The system according to claim 22, further comprising  
30   a debug script being generated utilizing said file.

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24. The system according to claim 17, further comprising:

a debug script being automatically generated including:

- 5 script code being generated for each of a plurality of function calls included in said software program, said script code setting a breakpoint at each of said plurality of function calls;
- 10 script code being generated which logs each of a plurality of said plurality of functions calls executed by said software program when said software program is executed under the control of said debug program; and
- 15 script code being generated which causes execution of said software program to continue after each of said plurality of said plurality of function calls is logged.

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